

*Capture and Culture Fisheries of India***Impact of Sanitary and Phytosanitary Measures —  
in Relation to Exports**

Shyam Salim and Brijesh Kumar Halawai

Central Institute of Fisheries Education, Deemed University, Mumbai - 400 061

Fisheries sector plays an important role in Indian economy by contributing to national income, exports, food and nutritional security and employment generation. At present, overall fisheries sub-sector of India has only a passing mention as part of the agricultural policy, referring to the fisheries development in the country. However, the different five-year plans of India have set up some broad policies with regard to investment and production in the fisheries sector. The production in fisheries sector, as a percentage of outlay for agricultural sector over the five-year plans, has been increasing continuously. This shows explicitly that greater importance in terms of higher allocation of funds to fisheries sub-sector within agriculture has been accorded. In the 1990s fisheries production structure witnessed significant changes. The inland fish production has been catching up with production from marine sector and now the former's share is almost half of the total fish production of the country. Aquaculture has emerged as the principal factor for the growth in inland fisheries. In recent years the policy for fisheries development had in a way tilted towards inland fisheries, particularly aquaculture. In addition, India's fisheries development plans are now aimed at increasing fish production, improving the welfare of the fishers, at promoting export and at providing food security.

The first step towards developing modern fishing industry in India was made in 1898. In 1952, a cooperation agreement covering fisheries also was signed between the Government of India, the USA and the United Nations. From this the modernization of fisheries spread to all coastal states in India to start with. In its wake, several programmes were launched for fishery development in the country including programmes for development of Inland Fisheries, Marine Fisheries, Welfare Programmes for Traditional Fishermen

and Programmes with International Aid. New Policies For Fisheries Development soon came to be introduced.

European consumers demand a high level of health protection. However, WTO members are not free to take any measures as they want. The Sanitary and Phytosanitary Agreement (SPSA) of the WTO, also called 'quarantine' agreement, sets out how measures can be taken to protect human, animal and plant health. The key principle is that they must be science-based. The agreement allows all WTO members to set their own level of quarantine protection, as long as they do not use unfair quarantine restrictions to block trade. The rules that govern international trade are those agreed upon during the Uruguay Round of Multilateral Trade negotiations and they apply to Members of the WTO. With respect to food safety matters, these rules are set out in the SPS Agreement. The overall objective of the SPS Agreement is to permit Member Countries to take legitimate measures to protect the life and health of their consumers. Sanitary and phytosanitary measures shall not be applied in a manner that would constitute a disguised restriction on international trade. Increasing agricultural exports from developing countries can have important benefits, as agriculture remains the major source of livelihood and food security for large sections of the population. If SPS measures become too stringent, the resulting contraction in agricultural exports would have a significant negative impact on such communities. Even the WTO has recognized this, and it has highlighted the need for consumers to compensate producers who would be adversely affected in this manner.

**Trade Liberalization and WTO  
in Fisheries**

In the case of India, the liberalization policies initiated in 1991 helped

fisheries attain higher growth in its exports (Shyam Salim, 2003). The Marine Products Export Development Authority (MPEDA) was established in 1972 and it is responsible for promotion and regulation of marine products exports from India. Government's policies regarding Indian imports and exports play a significant role in influencing the trade structure of India. Trade policies are in general categorized into two broad types: export promotion-oriented policies and import substitution-oriented policies. India is quite competitive in fish and fish products export and the WTO compulsions can be converted into opportunities by vigorously pursuing export of fish and fish products. The Government has also been operating a scheme of reimbursing central excise duty on HSD oil used by fishing vessels below 20 m length to offset the operational cost incurred by small mechanized fishing boat operators. India has received in the past and still enjoys substantial aid from several international organizations towards assistance for the development of fisheries terms. As per the WTO agreement, developed countries would reduce subsidies and tariff. Therefore, better overseas market will be available for Indian fish products. It is worth mentioning that the subsidies reduction requirement under WTO is not applicable to India. Under the provisions of SPS (sanitary and phyto-sanitary) agreement, all the member countries have the right to take sanitary and phyto-sanitary measures necessary for the protection of animal health or life. These SPS measures would also protect Indian industry from discriminate policies of developed nations and disguised restrictions imposed on Indian fish and fish products export.

The provisions under the various agreements are expected to have an impact on the different sectors and this paper highlights the possible impacts



of the SPS on the Fisheries Sector. The main provisions of WTO agreement are:

- Trade related intellectual property rights (TRIPS) and imposition of patent regime;
- Trade related investment measures (TRIMS);
- Reductions of domestic and export subsidies;
- Tariff reduction and bindings to provide market access; and
- Removal of quantitative restrictions (QR)
- Application of Sanitary and Phytosanitary (SPS) measures

### What are Sanitary and Phytosanitary Measures?

The Agreement on the Application of Sanitary and Phytosanitary Measures (the "SPS Agreement") came into force with the establishment of the World Trade Organization on 1 January 1995. It concerns the application of food safety and animal and plant health regulations.

For the purposes of the SPS Agreement, sanitary and phytosanitary measures are defined as any measures applied in respect of the following:

1. To protect human or animal life from risks arising from additives, contaminants, toxins or disease-causing organisms in their food;
2. To protect human life from plant- or animal-carried diseases;
3. To protect animal or plant life from pests, diseases, or disease-causing organisms;
4. To prevent or limit other damage to a country from the entry, establishment or spread of pests; and
5. These include sanitary and phytosanitary measures taken to protect the health of fish and wild fauna, as well as of forests and wild flora.

Measures for environmental protection (other than as defined above), to protect consumer interests, or for the welfare of animals, are not covered by the SPS Agreement. These concerns, however, are addressed by other WTO agreements (i.e., the TBT Agreement or Article XX of GATT 1994).

A separate agreement on food safety and animal and plant health standards (the Sanitary and Phytosanitary Measures Agreement or SPS) sets out the basic rules.

It allows countries to set their own standards. But it also says regulations must be based on science. They should be applied only to the extent necessary to protect human, animal or plant life or health. And they should not arbitrarily or unjustifiably discriminate between countries where identical or similar conditions prevail.

Member countries are encouraged to use international standards, guidelines and recommendations where they exist. However, members may use measures which result in higher standards if there is scientific justification. They can also set higher standards based on appropriate assessment of risks so long as the approach is consistent, not arbitrary. And they can to some extent apply the "precautionary principle", a kind of "safety first" approach to deal with scientific uncertainty. Article 5.7 of the SPS Agreement allows temporary "precautionary" measures.

The agreement still allows countries to use different standards and different methods of inspecting products. So how can an exporting country be sure the practices it applies to its products are acceptable in an importing country? If an exporting country can demonstrate that the measures it applies to its exports to achieve the same level of health protection as in the importing country, then the importing country is expected to accept the exporting country's standards and methods.

The agreement includes provisions on control, inspection and approval procedures. Governments must provide advance notice of new or changed sanitary and phytosanitary regulations, and establish a national enquiry point to provide information. The agreement complements that on technical barriers to trade.

### Internal Regulatory Structures

India has an elaborate system of quality inspection and certification before any product is exported. In recent times, more rigour has been brought into this process and the domestic

system is evolving in response to the reported number of rejections of exportable commodities. The Export Inspection Council (EIC) is the apex-designated agency that is charged with this responsibility. Briefly stated, SPS compliant exports are facilitated by the EIC, which imposes a system of three types of inspection and certification, namely consignment-wise inspection; in-process quality control and a food safety management system-based certification.

However, for brevity, we may recall that under the Consignment Wise Inspection (CWI), each export consignment is inspected and tested by the recognised inspection agencies. Samples are drawn on the basis of statistical sampling plans, inspected and tested for verifying the conformity of products to the prescribed standards. The in-Process Quality Control (IPQC) system lays emphasis on the responsibility of manufacturers/processors in ensuring consistency in quality during all stages of production by adopting quality control drills and exercising control on raw materials and bought-out components, manufacturing process, packing and final testing. Manufacturing and processing units, adjudged as having adequate levels of quality control in all these areas, are approved by EIC based on the assessments. Units approved under this system are eligible to get certificate of export worthiness without further verification of the quality of the out going consignments by EIC and random spot check of the consignments are carried out from time to time. Under the simplified inspection procedure, such units have been given the option, either to issue certificate of inspection of export worthiness on their own or to obtain certificate of inspection from EIC.

In view of growing concern the world over regarding health and safety parameters of food items being imported, international standards on Food Safety Management Systems like HACCP/GMP/GHP have been developed. Based on such standards, which are being prescribed by several of India's trading partners such as European Union, etc. EIC has introduced certification of product quality integrated







with the systems approach. Currently, Fish & Fishery Products, Egg Products and Milk Products are being certified under the above system.

### Sanitary and Phytosanitary Standards and Fisheries Products

The provisions of the SPS Agreement state that "measures taken to protect human, animal or plant life or health, must be based on scientific principles and shall not be applied in a manner that would constitute disguised trade restrictions." Indian products which have been particularly affected by SPS measures include marine products, groundnut and egg powder. Some cases have also been reported for mango pulp and sugar. In the case of marine products, the EU imposed a comprehensive ban on all fish exports from India in 1997 after some consignments were found to be contaminated with *Salmonella* and *Vibrio cholera* bacteria. The differences in the application of rules regarding such restrictions are evident from the fact that marine products were being exported to the United States throughout the period when there was a ban imposed by the EU.

For marine products, the rules for quality control and inspection of exports under the "Export of Fresh, Frozen and Processed Fish and Fishery products (Quality control, inspection and monitoring) Order and Rules, 1995" have been modeled on the basis of the directives given by the importing countries. These rules also comply with the HACCP quality control methodology. More units are being encouraged to comply with these standards.

There is no doubt that, ultimately, better SPS standards should lead to the lessening of health risks and should benefit consumers, but the manner in which these standards are being enforced gives an idea of the many problems that are being faced by the exporters of developing countries. Broadly, there are three types of problems. First, there are institutional problems such as what should be the point of inspection and conformity (internal or the point of entry) and who should provide the scientific basis to

settle disputes. Second, costs of compliance are becoming highly prohibitive because SPS standards are being changed periodically, which makes it difficult to attain the prescribed norms since the norms are becoming more stringent and are moving targets. As opposed to these periodic changes in SPS measures, the technical assistance to help exporters to match these requirements is simply lacking. Third, regardless of the fact that the agreement encourages multilateral agreements on mutual recognition of equivalence of specified SPS measures, member countries enter into bilateral mutual equivalence agreements. This practice favours imports from some countries over others, which results in discrimination against other members.

International trade of fishery products undergoes verification of a safety assurance system and/or port-of-entry inspection. In the case of listeriosis prevention, same way as for other food safety hazards, it is well recognized that implementation of safety assurance such as Good Hygiene Practices (GHP) and HACCP systems are the most efficient and reliable approaches to ensure safety. However, if records demonstrating the application of HACCP-based safety systems are not available, the alternative is inspection at the port-of-entry.

Marine products have long been the most buoyant ones among Indian export lines, following the imposition of stringent quality controls for marine products after the SPS regulations came into force. The demand for stringent and high hygienic standards in the production, and processing facilities greatly increased after the stipulation of Hazard Analysis Critical Control Point (HACCP) by United States Food and Drug Authority (USFDA), ISO9000 and other European Community directives (especially EC 91/493), and the EC ban on Indian marine products in 1997. The impact is most clearly felt in the production of individually quick frozen (IQF) and other value added frozen items for export to the major overseas markets. Marine products, on account of their health attributes and high unit value, are claimed to be one of the

fastest moving commodities in world markets. The world market for seafood is reported to have doubled between 1987/88-1997/98, reaching the US \$ 49.32 billion mark, of which India had a 2.4 per cent share. India has depended on shrimps as the major export product while the world market is fast changing the composition of the seafood basket. Consequently, Indian exporters are attempting to penetrate into the new markets of Europe and South East Asia. But, in value terms, frozen shrimp remains the largest marine food export product accounting for about 69.50 per cent of the total value of marine product exports from India during 2001-02, showing a slight decline from the over 71 per cent share in 1995.

The Indian marine products exports are driven primarily by the Japanese and the European Union (EU) markets. For example, exports to Japan increased from US \$ 251.49 million in 1987/88 to US \$ 641.68 million in 1997/98, whereas during the same period exports to EU grew from US \$ 60.76 million to US \$ 113.80 million. Since then, marine products exports have grown further due to rapid supply expansion through shrimp farming and the introduction of several resource-specific vessels to enhance marine fish landings. In 2001-02, Japan (30.56 per cent), USA (23.9 per cent) and EU (19.31 per cent) together accounted for about 74 per cent (by value) of India's marine product exports, while they had accounted for about 71.4 per cent in 2000-01. The value of marine product exports to Japan declined by almost a 32 per cent from US \$ 562.75 million in 2000-01 to US \$ 383.07 million in 2001-02. On the other hand, exports to USA and EU markets increased during this period by almost 25 per cent. Given the dominance of these markets in total shrimp exports from India, the importance of quality control becomes critical. Processed marine products differ widely, and they deteriorate rapidly in tropical conditions. The EC directive No. 91/493, dated 22 July, 1991 that came into force from 1 January, 1993 made it mandatory to comply with specified health conditions for the production and placement of these products in the EU markets, and in August 1997 it banned fishery products from India.



This precipitative action was justified by the EC on three primary grounds:

- Serious deficiencies with regard to infrastructure and hygiene in the fish processing establishments;
- Potentially high risk for public health given the conditions of production and processing of fisheries products;
- Contaminated by micro-organisms, which may constitute a hazard to human health.

The adjudicative problems with quality compliance can be looked at from three broad perspectives:

1. Pre-processing, including Shrimp aquaculture and handling of raw Shrimp at various stages, such as harvesting, sorting, etc.
2. Processing, wherein water quality, source of water for ice making (62 tests to ensure water hygiene), infrastructure (size of the wash room) and transportation utilities come in for sanctions.
3. Post-processing, including testing, packaging and marketing activities.

A case study indicates that Indian exporters have to incur large costs if they want to access the upper quality market. This heavy cost burden involves both fixed and variable cost components. Given the small and medium size of most processing units, an additional fixed investment to the tune of Rs. 1-2 crores per unit for upgrading, often becomes prohibitively high in the absence of a well-timed and concessional loan facility. These plants, it may be recalled, are not exclusively dedicated plants, and with no assurance of market access even if this kind of large investments are made to upgrade infrastructure, many existing players will find it impossible to continue in the business.

Interestingly the overhead constituent of the variable cost component of compliance for a medium size plant here is estimated to go up by a factor of 5.29. According to SEAI, the compliance cost for meeting the EC norms is 15-40 per cent of value for new units, with the cost being higher

for existing units. It is estimated by MPEDA that only two units in three may be able to upgrade themselves to the EC norms, while the rest would be forced to close down and exit from the business.

Thus, there are issues of sustainability in the marine export business. While, exporters have been pleading – so far unsuccessfully – for permission to move into deepsea fishing, the government is seriously concerned about the fragile marine eco-system in the shrimp habitats. Aquaculture is one available alternative, and MPEDA is assisting the activity with provision of technical assistance. The total area under shrimp farming at the end of 2001-02 was estimated at 1,35,077 hectares. Of this, more than 50,000 hectares are devoted to traditional shrimp farming practices in the States of Kerala, West Bengal and Karnataka. The remainder is under scientific farming, with the active assistance of MPEDA. The area potentially suitable for Shrimp farming along the coast in India is estimated to be 1.2 million hectares, of which only about 10 per cent is currently being utilized. There is therefore much scope for improving the production.

### Conclusion

SPS measures can and do impede trade in agricultural and food products since in many instances they are incompatible with prevailing systems of production and marketing in developing countries with insufficient account taken of the needs, constraints and problems faced by them. The manner in which the SPS Agreement has been implemented in the interests of the developed countries is a cause for concern. An acute problem is the lack of appropriate scientific and technical expertise and little technical assistance is being given to developing countries. The challenges facing both developed and developing countries are for collaboration of one with the other to reach accommodation and reconcile the disparate preoccupations relating trade and those relating to the protection of human, animal and plant health and the environment.

To sum up this discussion on marine product exports (especially shrimp) and the impact of SPS measures, it may be said the value market share of shrimp and its products from India declined following the 1997 ban by EU and the subsequent threat by USA relating to the Turtle Extruder Device (TED). Although, Shrimp exports were 69.50 per cent of the total value of marine export lines during 2001-02, the unit value realization remained low. This is due mainly to the high compliance cost of SPS measures that are estimated to increase operating expenses by a substantial factor. In the absence of any assurance of market access to developed countries, exporters are exploring other markets. Given India's long coastline and the availability of distinct marine life, especially the tiger shrimp, the scientific dimensions of the sustainability of aquaculture should be assessed from the viewpoint of the economic viability of small and medium enterprises (SMEs). SMEs enhance social welfare, and there is scientific knowledge that is enshrined in the indigenous system of marine husbandry. The future of an entire social group dependant on marine fishery for their livelihood is determined by choices made by a large number of consumers, business houses and government officials. This is an issue that must be brought to the top of the trade agenda.

### References

- BHATTACHARYA, B. and B. PAL., "Uruguay Round: Impact on India's Food Security and Environment". Indian Institute of Foreign Trade, New Delhi, 1999.
- BOJAN, J., "Current Status and Prospects of Seafood Export". India International Seafood Show Souvenir, pp 13-15, 7-9 February 2003
- CHAND, RAMESH., "Trade Liberalisation, WTO and Indian Agriculture: Experience and Prospects". Mittal Publications, 2002.
- CHIMINI, B.S., "WTO and Environment - Shrimp- Turtle and EC-Hormone Cases", The Economic and Political Weekly Vol.35 No.20 pp 1752-1761, 2002

DEODHAR, Y. SATISH., "WTO Pacts and Food Quality Issues", The Economic and Political Weekly, Vol. No., pp 2813-2816., 2001

FAO "Fish Utilization and Marketing Service; FAO Food Quality and Standards Service. Report of the FAO Expert Consultation on the Trade Impact of *Listeria* in Fish Products". Amherst, MA, USA, 17-20 May 1999. FAO Fisheries Report. No. 604. Rome, FAO. 1999. 34p.

HALIMA NOOR, The Impact of SPS Measures on Kenya, EcoNews Africa, Nairobi, Kenya.

International Development Research Centre (IDRC). "Standards And Trade" PROJECT INT/99/A64, Final Report, June 2002.

LAHSEN ABAOUCH, Fish Trade, Safety, Quality and Environmental issues. UNCTAD Workshop on Standards and trade, Geneva. 16-17/ 5/2002.

PRADEEP S. MEHTA and N. SURESH. Environmental Conditions in International Trade, CUTS-CITEE, Jaipur, India.

RAJESH MEHTA and J. GEORGE "Processed Food Products Exports from India: An Exploration with SPS Regime". Joint Research Project of Australian National University, University of Melbourne, Research and Information System (India) and Thammasat University (Thailand), sponsored by the Australian Centre

for International Agricultural Research.

SACHIN CHATURVEDI. "SPS/TBT and Agricultural Exports of South Asian countries. Research and Information System (RIS) for the Non-Aligned and Other Developing Countries. Regional Conference on Globalization and Agriculture: Challenges for South Asia" 4-5 December, 2002.

VENKATESWARLU, G, SHYAM SALIM and S. AYYAPPAN. "Possible impacts of WTO on Indian Fisheries Sector" Proceedings of the National workshop on "Fisheries Economics Research and Education In India: An Overview" held during 28-29 June 2001 at Central Institute of Fisheries Education, Mumbai. pp.76-80.

### Form IV (Rule 8)

Under The Press and Registration of Books Act, 1867 Statement about ownership and other particulars.

1. Place of Publication : VISAKHAPATNAM

2. Periodicity of its Publication : Monthly

3. Printer's Name : G. RAMA KRISHNA  
: Raamakrishna Printers Private Ltd.

1(a) Whether a citizen of India : Yes

(b) If a foreigner, the country of origin : -

Address : 49-24-5, Sankaramatham Road  
Madhuranagar,  
VISAKHAPATNAM-530 016

4. Publisher's Name : J.V.H. DIXITULU

1(a) Whether a citizen of India : Yes

(b) If a foreigner, the country of origin : -

5. Editor's Name : J.V.H. DIXITULU

6. Names and addresses of individuals who own the newspapers and partners or shareholders holding more than one percent of the total capital : Fishing Chimes Jayaashree Charitable Trust  
Sector 12 Plot 176  
MVP Colony, Visakhapatnam-17

I, J.V.H. Dixitulu, hereby declare that the particulars given above are true to the best of my knowledge and belief

Sd/- J.V.H. DIXITULU

Date:01-03-2005

Publisher

### Slips and Rectifications to be noted

Article on

'Singhi (*Heteropneustes fossilis*) Culture' at pages 15-24 of Jan 2005 issue of Fishing Chimes

The article with the above caption, authored by Narasimharaju V Chintalapaati was published in Jan 2005 (Vol 24 No 10) special issue of *Fishing Chimes* at pages 15-24. The author has one spelling and three expressional errors to point out in it for the readers to note. These are: 1) In the caption, the spelling of the generic name of Singhi may be noted as '*Heteropneustes*' and not as '*Heteropeneustes*' as given. (Between 'p' and 'n', 'e' intruded). 2) At page 17 Column 2; under the caption 'Backyard Hatchery, the height (of water) to be maintained in the hatchery tank for holding spawn may be noted as six inches and not three feet.

At page 20 it was mentioned towards the end of para 2 that there was mortality of fishes. This mortality was only of major carps, the author clarifies.

In para 3 on the same page the expression 'winter crops' was used in line 12. This may be read as 'inter crops', he says.